

Kite-Tail Measurement

Reporting Category Measurement

Topic Estimating and measuring length in inches and centimeters

Materials

- Story or poem about kite flying
- Blue paper kite shapes, each labeled with a letter (A, B, C, D, etc.), with blue ribbon tails of various lengths measured in whole units of inches
- Red paper kite shapes, each labeled with a letter (A, B, C, D, etc.), with red ribbon tails of various lengths measured in whole units of centimeters
- Centimeter and inch rulers
- CD of music that suggests a kite gliding in the sky
- Kite-Tail Measurement sheets (attached)
- Kite Drawing assessment (attached)

Vocabulary

length, ruler, inch, centimeter

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Enhance background knowledge of kite flying by reading aloud a story or poem about flying a kite.
2. Give each student an inch ruler, a copy of the Kite-Tail Measurement in *Inches* sheet, and a blue paper kite shape with a blue ribbon tail measured in whole units of inches. Have students measure the tails to the nearest inch and record their measurements on paper, including the letter names of the kites (e.g., Kite A = 14 inches).
3. Have students place their kites, rulers, and pencils on their desks and stand up, holding their papers. Explain that when they hear the music, they are to glide safely around the room like a kite up in the sky until the music stops. When it stops, each student must sit down at the nearest desk, measure the kite tail found there, and record the measurement on his/her paper.
4. Repeat this process five times.
5. After each student has made and recorded five kite-tail measurements, ask students to help you order all the blue kite tails from the shortest to the longest, using their recorded measurements. Ask guiding questions during this process, such as the following:
 - Is the size of the kite itself important to our ordering? Why, or why not?
 - Which kite has the shortest tail? Which has the longest? How do you know?Hang the kites in order on the bulletin board.
6. Repeat steps 2–5, using centimeter rulers, copies of the Kite-Tail Measurement in *Centimeters* sheet, and red paper kite shapes with red ribbon tails of various lengths

measured in whole units of centimeters. Ask guiding questions during the hanging process, such as the following:

- Is there a red kite and a blue kite that look like they have the same length tail? Is the measurement of a tail the same in centimeters as it is in inches?
- Are centimeters and inches the same length? If not, which is longer, one inch or one centimeter?

7. Close with the “Kite Drawing” assessment page, attached.

Assessment

- **Questions**
 - Which unit of measurement is larger, one inch or one centimeter?
 - How do you use a ruler to measure inches?
- **Journal/Writing Prompts**
 - You and a friend are building two birdhouses. The directions give the lengths of all the pieces of the birdhouse, but they do not say whether the lengths are in inches or centimeters. You decide to use inches, and your friend decides to use centimeters. Will the birdhouses be the same size? If not, explain which one will be larger and why.
 - Mike has never used a ruler before. Describe in detail how you would tell Mike to use a ruler to measure objects to the nearest inch.
- **Other**
 - Use students’ independent work on the Kite Drawing page as a formal assessment.

Extensions and Connections (for all students)

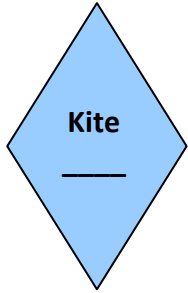
- Repeat the activity, using cutouts of animals and animal tails.
- Call attention to the connection between a ruler and a number line. Allow students to use a ruler as a number line as needed during computation.

Strategies for Differentiation

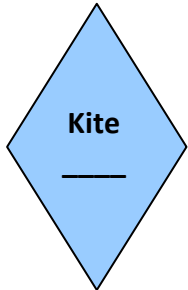
- Allow students to do the activity in pairs, selecting partners who will support each other’s learning styles.
- For students who need acceleration, provide a separate set of kites with tails that have lengths measured in smaller increments (e.g., $1\frac{1}{2}$ in.).
- Allow students to use linking cubes or inch worms instead of rulers.
- To incorporate physical movement, have students participate in a long jump contest and use their measuring skills to measure the distances in inches and centimeters.
- Extend the activity over two days to allow for a slower pace of work and more thorough discussion. The first day could include the inch activities, and the second day, the centimeter activities.

Kite-Tail Measurement in *Inches*

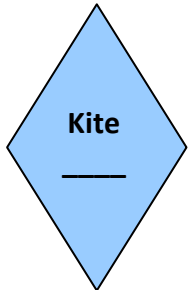
Name _____



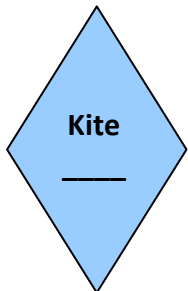
Kite Tail = _____



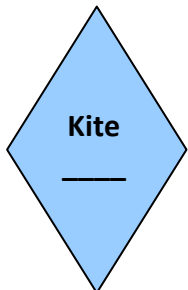
Kite Tail = _____



Kite Tail = _____



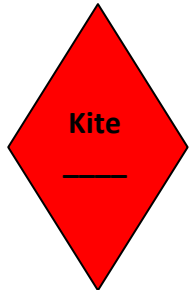
Kite Tail = _____



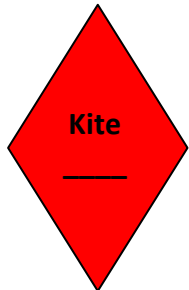
Kite Tail = _____

Kite-Tail Measurement in *Centimeters*

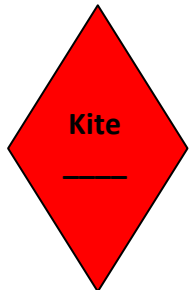
Name _____



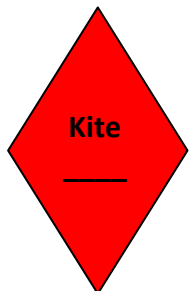
Kite Tail = _____



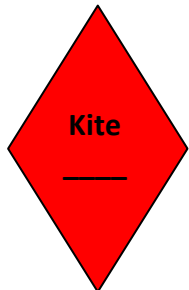
Kite Tail = _____



Kite Tail = _____



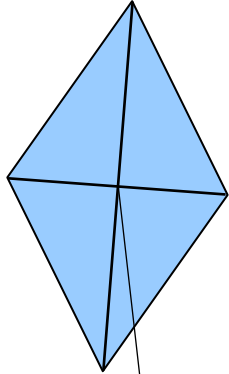
Kite Tail = _____



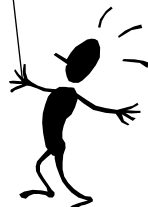
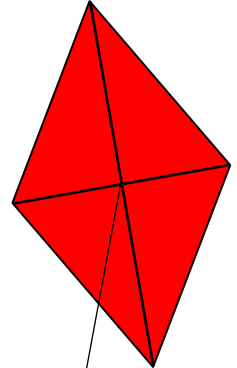
Kite Tail = _____

Kite Drawing

Name _____



On Person A's kite, draw a tail that is 4 inches long.
On Person B's kite, draw a tail that is 10 centimeters long.
Then, answer the question below.



Person A



Person B

What do you notice about the length of the two tails that you drew?
